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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,429	10/14/2005	Michael John Damzen	4586-4005	7521

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EXAMINER
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HUGHES, DEANDRA M

ART UNIT	PAPER NUMBER
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3663

DATE MAILED: 08/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/519,429

Applicant(s)

DAMZEN, MICHAEL JOHN

Examiner

Deandra M. Hughes

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/22/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Information Disclosure Statement*

1. The information disclosure statement (IDS) filed on 12/22/04 has been considered by the examiner and is found to be cumulative to the art of record.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 9, and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Honea (US 2002/0118718 published Aug. 29, 2002).

With regard to claim 1, Honea discloses a optically amplifying device (fig. 3) comprising a slab of material which is side-pumped (#40 and #48) in use to provide a gain region (#46) the device (paragraph [0023]), comprising:

- path definition means for defining a path through the gain region (#42, #50, #44, #52) for optical radiation to be amplified;
- wherein the path definition means is arranged such that said path comprises at least two, spatially different, incidence reflections in the gain region (paragraph [0019]).

With regard to claim 9, the path definition means comprises at least one surface of the slab material (e.g. note interface between #44 and #46).

With regard to claim 11, the gain extraction would inherently be of the same magnitude because the incident signal paths are merely 180 degrees out of phase.

Claim 12 is merely the normal method of operations of the apparatus as claimed.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honea (US 2002/0118718 published Aug. 29, 2002) in view of Alcock (US 5,315,612 published May 24, 1994).

Honea does not specifically disclose that the grazing incident angle reflections are not more than 10 degrees. However, Alcock teaches grazing incident angle reflections of not more than 10 degrees (col. 2, line 9). It would have been obvious to one of ordinary skill in the art (e.g. an optical engineer) at the time the invention was made to reflect the pump at grazing angles less than 10 degrees for the advantage of achieving high gain (col. 4, line 4).

6. Claims 4-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honea (US 2002/0118718 published Aug. 29, 2002) in view of Zhang (US 2002/0105997 published Aug. 8, 2002).

With regard to claims 4-6, Honea does not specifically disclose that the gain region has more than one gain area. However, Zhang teaches size pumping of a

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multiple spatially different gain areas (fig. 5B, #17). It would have been obvious to one of ordinary skill in the art (e.g. an optical engineer) at the time the invention was made to use multiple gain areas for the advantage of independent gain control.

With regard to claims 7-8 and 10, Honea's fig. 3 does not specifically disclose a mirror to feedback the signal thereby enabling it to lase. However, Zhang teaches a mirror as a feedback mechanism enabling lasing (paragraph [0068]). It would have been obvious to one of ordinary skill in the art (e.g. an optical engineer) at the time the invention was made to use a mirror as a feedback mechanism for the advantage of optical signal generation.

### ***Claim Objections***

7. Claim 10 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim. See MPEP § 608.01(n).

### ***Conclusion***


8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Altmann, Byren, Carrig, Dube, Gong, Guch, Kiriya, Knights, Marshall, Page, Plaessmann, Rapoport, Rothenberg, Scaggs, Vetrovec, and Zapata disclose optical gain slab media pumped at grazing angles.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deandra M. Hughes whose telephone number is 571-272-6982. The examiner can normally be reached on M-F, 8:30am-5:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Deandra M Hughes  
Primary Examiner  
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